



FCC Docket Nos. 03-137 and 12-357
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Dear Sir or Madam:

Maryland Smart Meter Awareness (MSMA) greatly appreciates the opportunity to comment on the FCC's current standards for exposure to radio frequency radiation (RF) emanating from wireless devices. MSMA is a grassroots organization of about five hundred Maryland residents formed to educate the people of Maryland about the dangers of smart meters and to raise public awareness about the biological effects of wireless radiation with regard to all wireless technologies. We feel very strongly that there is an urgent need for more stringent regulation standards for Radio Frequency Radiation (RF) in the United States.

For the last eighteen months, we have been totally immersed in the scientific literature regarding RF, and listening to experts. MSMA has concluded that the FCC guidelines are no longer adequate to protect the public. They are inadequate both because RF exposure levels have been set far too high and because they fail to address the cumulative impact of multiple sources of RF in the homes and businesses. This obviously includes indoor environments, but it also includes outdoor areas such as backyards, patios, and areas adjacent to workplaces. As new wireless devices proliferate throughout society, they fill our airspace and communities with RF. Thus it is no longer useful to just have an FCC standard focused on devices and technologies. We also need a maximum permissible exposure standard for RF for both the home and business environments such that all biological systems will be protected from being exposed to dangerous levels of RF. One need only look around the world to other governments who have carefully examined this issue more recently to get an idea of how outdated the US standards indeed are. Currently, standards for wireless devices are 10 times lower in India than in the US. In Russia, exposure to 1000 microW/cm² (compare to WiFi) is acceptable for only 15 minutes a day.

The most common sense guidelines in the world for pulsed microwave radiation come from the Czech Republic. WiFi is pulsed radiation, which is known to be more harmful than non-pulsed radiation. The Czech guidelines for pulsed microwave radiation allow exposure to 4 microW/cm² for a 6-hour day (school day). This is 0.4% of the FCC

Guideline. The reason for the lower maximum is that the several countries with stricter guidelines (Czech Republic, Switzerland, China, Hungary, Poland, etc.) do not base their guidelines solely on heating; these countries base their guidelines on biological effects that include changes in calcium flux, changes in the permeability of the blood-brain barrier, and damage to DNA.

It is worth noting that even though Switzerland has one of the lowest allowable emission regulations people are still becoming ill from RF. MSMA urges the FCC to establish an independent health advisory team made up of medical experts to study the literature on the biological effects of non-ionizing radiation. This is of critical importance if the FCC wishes to establish credible guidelines that are indeed protective of health and the environment.

Below are three lists of useful references. The first is a list of government and independent organizations that have either banned wireless technology or at least have issued a warning about this technology. The second list consists of doctors and scientists who have called for stricter regulation and/or a moratorium on wireless technology. The third list consists of the latest studies linking radio frequency radiation with adverse health effects.

Should anyone have any questions about these comments, please contact me at (410) 358-4616 or send me an e-mail message at: jlibberconsulting@gmail.com.

Jonathan D. Libber, President
Maryland Smart Meter Awareness

GOVERNMENTS AND INDEPENDENT ORGANIZATIONS THAT BAN OR WARN AGAINST WIRELESS TECHNOLOGY

1993: Environmental Protection Agency (EPA): The FCC's exposure standards are "seriously flawed."

Official comments to the FCC on guidelines for evaluation of electromagnetic effects of radio frequency radiation, FCC Docket ET 93-62, November 9, 1993.

1993: Food and Drug Administration (FDA): "FCC rules do not address the issue of long-term, chronic exposure to RF fields." Comments of the FDA to the FCC, November 10, 1993.

1993: National Institute for Occupational Safety and Health (NIOSH): The FCC's standard is inadequate because it "is based on only one dominant mechanism—adverse health effects caused by body heating."

Comments of NIOSH to the FCC, January 11, 1994.

1994: Amateur Radio Relay League Bio-Effects Committee: “The FCC’s standard does not protect against non-thermal effects.” Comments of the ARRL Bio-Effects Committee to the FCC, January 7, 1994.

2000: UK Department of Education: Children under 16 should not use cell phones except in an emergency. http://www.cellular.co.za/news_2000/news-08052000_uk_schools_warned_over_radiation.htm

2002: Interdisciplinary Society for Environmental Medicine (3000 physicians in Germany) recommends banning cell phone use by children and banning cell phones and cordless phones in preschools, schools, hospitals, nursing homes, events halls, public buildings and vehicles. http://www.powerwatch.org.uk/pdfs/20021019_englisch.pdf

2003: American Bird Conservancy and Forest Conservation Council: Brought a lawsuit against the FCC because millions of migratory birds were being disoriented by microwave radiation and crashing into cell towers. http://www.ewire.com/display.cfm/Wire_ID/1498

2004: International Association of Fire Fighters opposes communication antennas on fire stations. <http://www.iaff.org/HS/Facts/CellTowerFinal.asp>

2005: Salzburg, Austria’s Public Health Department bans WLAN and DECT phones in public schools. <http://www.safeinschool.org/2011/01/wi-fi-is-removed-from-schools-and.html>

August 2005: Austrian Medical Association: Warns against Wi-Fi, cordless phones, and cell phone use by children. http://www.thepeoplesinitiative.org/Wifi_and_Schools.html

August 2005: Vienna Medical Association warns against Wi-Fi, and cell phone use by children up to age 16. http://www.mastsanity.org/index.php?option=com_docman&task=doc_download&gid=2&Itemid=64

2006: Frankfurt, Germany’s government states it will not install WiFi in its schools until it has been shown to be harmless. http://www.icems.eu/docs/deutscher_bundestag.pdf

2006: UK schools remove their wireless networks: Prebandal Preparatory School, Chichester, West Sussex; Ysgol Pantycelyn School in Carmarthenshire, Wales; and Stowe School, in Buckinghamshire, England. London Times, November 20, 2006. http://www.timesonline.co.uk/tol/life_and_style/education/article642575.ece

2007: Ballinderry Primary School, Ireland: Removed Wi-Fi to protect young children. <http://www.safeinschool.org/2011/01/wi-fi-is-removed-from-schools-and.html>

2007 Bavaria, Germany's Parliament recommends against Wi-Fi in schools.
http://www.icems.eu/docs/deutscher_bundestag.pdf

2007 Australian Democrats: The “explosion in wireless communications technology” is causing widespread illness.
http://www.democrats.org.au/docs/2007/Joining_the_Dots_ExecSummary.pdf

2007: European Environmental Agency, Europe's top environmental watchdog, calls for immediate action to reduce exposure to radiation from Wi-Fi, mobile phones and their masts. http://www.nzherald.co.nz/world/news/article.cfm?c_id=2&objectid=10463870

2008: International Commission on Electromagnetic Safety (comprised of scientists from 16 nations): Recommends limiting cell phone use by children, teenagers, pregnant women and the elderly. <http://www.icems.eu/resolution.htm>

2007: Therold, Ontario closes down its citywide Wi-Fi pilot scheme.
<http://www.glastonburynaturalhealth.co.uk/WhyWi-Fi.html>

2008: Lakehead University, Ontario bans Wi-Fi on campus.
<http://www.cbc.ca/news/canada/toronto/story/2010/08/15/ontario-wifi.html>

2008: Madhya Pradesh, India: Bans cell phones in schools by both students and teachers. http://www.indiaedunews.net/Madhya_Pradesh/Teachers_students_unhappy_with_mobile_phone_ban_in_schools_5241/

2008: National Library of France: Removes Wi-Fi because of health concerns and limits installation to cable connections. <http://www.next-up.org/pdf/FranceNationalLibraryGivesUpWiFi07042008.pdf>

2008: Paris, France removes Wi-Fi from four public libraries because of health concerns. http://www.accessmylibrary.com/coms2/summary_0286-35451555_ITM

2008 Sainte-Geneviève University, Paris: Removes Wi-Fi from its library because of health concerns. <http://www.next-up.org/pdf/AnalysisWiFiHotSpotsDeactivationSainteGenevieveLibraryParis24052008.pdf>

2008: Progressive Librarians Guild recommends against wireless technology in libraries. <http://libr.org/plg/wifiresolution.php>

2008: Russian National Committee for Non-Ionizing Radiation Protection warns that cell phones are unsafe even for short conversations. Children under 16, pregnant women, epileptics, and people with memory loss, sleep disorders and neurological diseases should never use cell phones. http://www.radiationresearch.org/pdfs/rncnirp_children.pdf

2008 Sebastopol, California: Reneges on its contract to install citywide Wi-Fi.

<http://www.boingboing.net/2008/03/24/town-of-sebastopol-c.html>

2008: University of Pittsburgh Cancer Institute: Children should never use a cell

phone except in an emergency. <http://www.post-gazette.com/pg/08205/898803-114.stm>

2008: Voice (UK Teachers Union) calls for a ban on Wi-Fi in schools.

http://www.voicetheunion.org.uk/index.cfm/page/_sections.content.cfm/cid/1326/navid/434/parentid/330

2009: Hérouville Saint-Clair, France: Bans Wi-Fi in public schools.

<http://www.wifiinschools.org.uk/4.html>

2009: Irish Doctors Environmental Association: Warns that current safety guidelines are “not appropriate.” <http://www.ideaireland.org/>

2009: Karnataka State, India: Bans cell phones in all schools and pre-university

colleges. <http://www.hindu.com/2009/09/14/stories/2009091454460500.htm>

May 2009: U.S. Fish and Wildlife Service urges Congress to focus on the potential connection between electromagnetic fields and “Bee Colony Collapse”.

<http://electromagnetichealth.org/electromagnetic-health-blog/emf-and-warnke-report-on-bees-birds-and-mankind/>

December, 2010: French Parliament passes a law prohibiting advertising cell phones to children under 14; prohibits children up to age 14 from using cell phones in pre-schools and public schools; requires cell phones to be labeled with SAR values and a

recommendation to use headsets. <http://www.enviroblog.org/2010/12/french-cell-phone-radiation-disclosure-at-point-of-sale.html>

May 27, 2011: Council of Europe passes a resolution recommending wired Internet connections in schools, and the creation of radiation-free zones to protect electrosensitive people. <http://assembly.coe.int/Documents/AdoptedText/tal11/eRES1815.htm>.

August 30, 2011: The Israeli Ministry of Education publishes guidelines strictly limiting the use of mobile phones on all school grounds, citing children’s and youths’ increased risk of malignant tumors and the “passive exposure” experienced by children who do not use phones.

<http://norad4u.blogspot.com/2011/09/israeli-ministry-of-education-is-going.html>

September 8, 2011: Pretty River Academy in Collingwood, Ontario removes WiFi from campus as a precaution, joining Roots and Wings Montessori school in Surrey, British Columbia. http://www.safeschool.ca/uploads/CTV_School_cuts_WiFi.pdf;

http://www.safeschool.ca/School_Bans_WiFi.html

DOCTORS AND SCIENTISTS CALLING FOR STRICTER REGULATION AND/OR A MORATORIUM ON WIRELESS TECHNOLOGY

Vienna Resolution 1998
Salzburg Resolution 2000
Declaration of Alcalá 2002
Catania Resolution 2002
Freiburger Appeal 2002
Bamberger Appeal 2004
Maintaler Appeal 2004
Coburger Appeal 2005
Oberammergau Appeal 2005
Haibacher Appeal 2005
Pfarrkirchener Appeal 2005
Freienbacher Appeal 2005
Lichtenfelser Appeal 2005
Hofer Appeal 2005
Helsinki Appeal 2005
Parish Kirchner Appeal 2005
Saarlander Appeal 2005
Stockacher Appeal 2005
Benevento Resolution 2006
Allgäuer Appeal 2006
WiMax Appeal 2006
Schlächterner appeal
Brussels Appeal 2007
Venice Resolution 2008
Berlin Appeal 2008
Paris Appeal 2009
London Resolution 2009
Porto Alegre Resolution 2009
European Parliament
EMF Resolution 2009
Dutch Appeal 2009
Int'l Appeal of Würzburg 2010
Copenhagen Resolution 2010
Seletun Consensus Statement 2010

LATEST STUDIES LINKING RF WITH ADVERSE HEALTH EFFECTS

While there are literally thousands of studies showing adverse health effects from RF, we have collected some of the more recent studies below:

<http://www.emf-portal.de/summarized.php?l=e>

04.02.2013: The influence of microwave radiation from cellular phone on fetal rat brain.

Jing J, Yuhua Z, Xiao-Qian Y, Rongping J, Dong-Mei G, Xi C (2012), Electromagn Biol Med 31 (1): 57 - 66

31.01.2013: The effect of melatonin on body mass and behaviour of rats during an exposure to microwave radiation from mobile phone.

Sokolovic D, Djordjevic B, Kocic G, Babovic P, Ristic G, Stanojkovic Z, Sokolovic DM, Veljkovic A, Jankovic A, Radovanovic Z (2012), Bratisl Lek Listy 113 (5): 265 - 269

28.01.2013: Heart rate variability (HRV) analysis in radio and TV broadcasting stations workers.

Bortkiewicz A, Gadzicka E, Szymczak W, Zmyslony M (2012), Int J Occup Med Environ Health: in press

28.01.2013: The effects of a 1.8 GHz continuous electromagnetic fields on mucociliary transport of human nasal mucosa.

In SM, Kim HJ, Park RW, Kim W, Gimm YM, Park I, Hong S, Hong JJ, Oh JH, Kahng H, Park EY (2012), Laryngoscope: in press

25.01.2013: Effects of simultaneous combined exposure to CDMA and WCDMA electromagnetic fields on serum hormone levels in rats.

Jin YB, Choi HD, Kim BC, Pack JK, Kim N, Lee YS (2012), J Radiat Res: in press

23.01.2013: Case-control study of paternal occupation and childhood leukaemia in Great Britain, 1962-2006.

Keegan TJ, Bunch KJ, Vincent TJ, King JC, O'Neill KA, Kendall GM, Maccarthy A, Fear NT, Mfg M (2012), Br J Cancer 107 (9): 1652 - 1659

22.01.2013: Oxidative stress induced by 1.8 GHz radio frequency electromagnetic radiation and effects of garlic extract in rats.

Avci B, Akar A, Bilgici B, Tuncel OK (2012), Int J Radiat Biol 88 (11): 799 - 805

21.01.2013: ECG changes in factory workers exposed to 27.2 MHz radiofrequency radiation.

Chen Q, Xu G, Lang L, Yang A, Li S, Yang L, Li C, Huang H, Li T (2012), Bioelectromagnetics: in press

17.01.2013: Electromagnetic fields at 2.45 GHz trigger changes in heat shock proteins 90 and 70 without altering apoptotic activity in rat thyroid gland.

Misa Agustino MJ, Leiro JM, Jorge Mora MT, Rodriguez-Gonzalez JA, Jorge Barreiro FJ, Ares-Pena FJ, Lopez-Martin E (2012), Biol Open 1 (9): 831 - 838

15.01.2013: Melatonin modulates wireless (2.45 GHz)-induced oxidative injury through TRPM2 and voltage gated Ca(2+) channels in brain and dorsal root ganglion in rat.

Naziroglu M, Celik O, Ozgul C, Cig B, Dogan S, Bal R, Gumral N, Rodriguez AB, Pariente JA (2012), Physiol Behav 105 (3): 683 - 692